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About the cover . . .

Does the image in this photo look to you like a series of human footprints crossing a dinosaur trail? It did to many creationists. The clear trail angling off to the right is the II-D dinosaur trail. Crossing it, from the bottom to the top of the picture, is the famous Taylor trail, named after Stanley Taylor who, in the 1970s, promoted this "human trackway" through his film, *Footprints in Stone*. For years, the Taylor trail stood as the most concrete and persuasive evidence creationists had to offer in support of their claim that human and dinosaur tracks appeared together along the Paluxy River in Texas.

But now the picture has changed. After being encouraged by critics to take a closer look at important features of the individual tracks in the Taylor trail, many creationists have changed their minds. And, consistent with their new position, they have taken *Footprints in Stone* off the market, removed the footprint casts from the Paluxy River exhibit at the Museum of Creation and Earth History at the Institute for Creation Research, and issued public statements retracting some of their earlier claims. How this all came about and what it means makes for exciting reading in this issue of *Creation/Evolution*. (Photo © 1986 by Glen J. Kuban.)

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Scientific Creationism and Error

Robert Schadewald

Scientific creationism differs from conventional science in numerous and substantial ways. One obvious difference is the way scientists and creationists deal with error.

Science is wedded, at least in principle, to the evidence. Creationism is unabashedly wedded to doctrine, as evidenced by the statements of belief required by various creationist organizations and the professions of faith made by individual creationists. Because creationism is first and foremost a matter of biblical faith, evidence from the natural world can only be of secondary importance. Authoritarian systems like creationism tend to instill in their adherents a peculiar view of truth.

Many prominent creationists apparently have the same view of truth as political radicals: whatever advances the cause is true; whatever damages the cause is false. From this viewpoint, errors should be covered up when possible and only acknowledged when failure to do so threatens greater damage to the cause. If colleagues spread errors, it is better not to criticize them publicly. Better to have followers deceived than to have them question the legitimacy of their leaders. In science, fame accrues to those who overturn errors. In dogmatic systems, one who unnecessarily exposes an error to the public is a traitor or an apostate.

Ironically, creationists make much of scientific errors. The "Nebraska Man" fiasco, where the tooth of an extinct peccary was misidentified as belonging to a primitive human, is ubiquitous in creationist literature and debate presentations. So is the "Piltdown Man" hoax. Indeed, creationist propagandists often present these two scientific errors as characteristic of paleoanthropology. It is significant that these errors were uncovered and corrected from within the scientific community. In contrast, creationists rarely expose their own errors, and they sometimes fail to correct them when others expose them.

Bob Schadewald is a free-lance science writer, specializing in the offbeat. He has been researching and writing on creationism for the past eight years.

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Gish's Proteins

Duane Gish, a protein biochemist with a Ph.D. from Berkeley, is vice-president of the Institute for Creation Research (ICR) and creationism's most well-known spokesperson. A veteran of perhaps 150 public debates and thousands of lectures and sermons on creationism, Gish is revered among creationists as a great scientist and a tireless fighter for the truth. Among noncreationists, however, Gish has a reputation for making erroneous statements and then pugnaciously refusing to acknowledge them. One example is an unfinished epic which might be called the tale of two proteins.

In July 1983, the Public Broadcasting Sytem televised an hour-long program on creationism. One of the scientists interviewed, biochemist Russell Doolittle, discussed the similarities between human proteins and chimpanzee proteins. In many cases, corresponding human and chimpanzee proteins are identical, and, in others, they differ by only a few amino acids. This strongly suggests a common ancestry for humans and apes. Gish was asked to comment. He replied:

> If we look at certain proteins, yes, man then—it can be assumed that man is more closely related to a chimpanzee than other things. But on the other hand, if you look at other certain proteins, you'll find that man is more closely related to a bullfrog than he is to a chimpanzee. If you focus your attention on other proteins, you'll find that man is more closely related to a chicken than he is to a chimpanzee.

I had never heard of such proteins, so I asked a few biochemists. They hadn't either. I wrote to Gish for supporting documentation. He ignored my first letter. In reply to my second, he referred me to Berkeley geochronologist Garniss Curtis. I wrote to Curtis, who replied immediately.

Some years ago, Curtis attended a conference in Austria where he heard that someone had found bullfrog blood proteins very similar to human blood proteins. Curtis offered an explanatory hypothesis: the "frog" which yielded the proteins was, he suggested, an enchanted prince. He then predicted that the research would never be confirmed. He was apparently correct, for nothing has been heard of the proteins since. But Duane Gish once heard Curtis tell his little story.

This bullfrog "documentation" (as Gish now calls it) struck me as a joke, even by creationist standards, and Gish simply ignored his alleged chicken proteins. In contrast, Doolittle backed his televised claims with published protein sequence data. I wrote to Gish again suggesting that he should be able to do the same. He didn't reply. Indeed, he has never since replied to any of my letters.

John W. Patterson and I attended the 1983 National Creation Conference in

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Roseville, Minnesota. We had several conversations there with Kevin Wirth, research director of Students for Origins Research (SOR). At some point, we told him the protein story and suggested that Gish might have lied on national television. Wirth was confident that Gish could document his claims. He told us that, if we put our charges in the form of a letter, he would do his best to get it published in *Origins Research*, the SOR tabloid.

Gish also attended the conference, and I asked him about the proteins in the presence of several creationists. Gish tried mightily to evade and to obfuscate, but I was firm. Doolittle provided sequence data for human and chimpanzee proteins; Gish could do the same—*if* his alleged chicken and bullfrog proteins really exist. Gish insisted that they exist and promised to send me the sequences. Skeptical, I asked him pointblank: "Will that be before hell freezes over?" He assured me that it would. After two-and-one-half years, I still have neither sequence data nor a report of frost in Hades.

Shortly after the conference, Patterson and I submitted a joint letter to *Origins Research*, briefly recounting the protein story and concluding, "We think Gish lied on national television." We sent Gish a copy of the letter in the same mail. During the next few months, Wirth (and probably others at SOR) practically begged Gish to submit a reply for publication. According to Wirth, someone at ICR, perhaps Gish himself, responded by pressuring SOR not to publish our letter. Unlike Gish, however, Kevin Wirth was as good as his word. The letter appeared in the spring 1984 issue of *Origins Research*—with no reply from Gish.

The 1984 National Bible-Science Conference was held in Cleveland, and again Patterson and I attended. Again, I asked Gish for sequence data for his chicken and bullfrog proteins. This time, Gish told me that any further documentation for his proteins is up to Garniss Curtis and me.

I next saw Gish on February 18, 1985, when he debated philosopher of science Philip Kitcher at the University of Minnesota. Several days earlier, I had heralded Gish's coming (and his mythical proteins) in a guest editorial in the student newspaper, *The Minnesota Daily*. Kitcher alluded to the proteins early in the debate, and, in his final remarks, he demanded that Gish either produce references or admit that they do not exist. Gish, of course, did neither. His closing remarks were punctuated with sporadic cries of "Bullfrog!" from the audience.

That evening, Duane Gish addressed about two hundred people assembled in a hall at the student union. During the question period, Stan Weinberg, a founder of the Committees of Correspondence on Evolution, stood up. Scientists sometimes make mistakes, said Weinberg, and, when they do, they own up to them. Had Gish ever made a mistake in his writings and presentations? If so, could his chicken and bullfrog proteins have been a mistake? Gish made a remarkable reply.

He has, indeed, made mistakes, he said. For instance, an erroneous translation by another creationist (Robert Kofahl) once led him to believe that

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hydrogen peroxide and hydroquinone, two chemicals used by the bombardier beetle, spontaneously explode when mixed. This error led him to claim in a book and in his presentations that the beetle had to evolve a chemical inhibitor to keep from blowing itself up. When he learned that hydrogen peroxide and hydroquinone do not explode when mixed, he said, he corrected the error in his book.

Regarding the bullfrog proteins, Gish said that he relied on Garniss Curtis for them. Perhaps Curtis was wrong. As for the chicken proteins, Gish made a convoluted and (to a nonbiochemist) confusing argument about chicken lysozyme. It was essentially the same answer he had given me immediately after his debate with Kitcher, when I went onstage and asked him once again for references. It was also the same answer he gave two nights later in Ames, Iowa, in response to a challenge by John W. Patterson. I will discuss its substance, relevance, and potential for deception after dealing with the bombardier beetle.

Gish neglected to mention certain details of the bombardier beetle business. Early in 1978, Bill Thwaites and Frank Awbrey of San Diego State University mixed hydrogen peroxide and hydroquinone in front of their "two model" creation-evolution class with a nonexplosive result (Weber, 1981). Gish may have corrected his book, but he continued to use demonstrably false arguments about the bombardier beetle in debate presentations. I personally heard him do so on January 17, 1980, in a debate with John W. Patterson at Graceland College in Lamoni, Iowa.

About the chicken lysozyme: three times in three days Gish was challenged to produce references for chicken proteins closer to human proteins than the corresponding chimpanzee proteins. Three times he responded with an argument which essentially reduces to this: if human lysozyme and lactalbumin evolved from the same precursor, as scientists claim, then human lysozyme should be closer to human lactalbumin than to chicken lysozyme, but it is not.

Well, although it is true that human lysozyme is *not* closer to human lactalbumin than to chicken lysozyme, this comes as no shock and does not make a case for creationism. Furthermore, it doesn't at all address the issue that we raised. We were talking about Gish's earlier comparison of human, chimp, and chicken proteins, and Gish changed the subject and started comparing human lysozyme to human lactalbumin!

Few of his creationist listeners know what lysozyme is, and perhaps none of them knew that human and chimpanzee lysozyme are identical and that chicken lysozyme differs from both by fifty-one out of 130 amino acids (Awbrey and Thwaites, 1982). To one unfamiliar with biochemistry and, especially, Gish's apologetic methods, it *sounded* like he responded to the question. Whether by design or by some random process, Gish's chicken lysozyme apologetic was admirably suited to deceive listeners.

One who was taken in by it was Crockett Grabbe, a physicist with the University of Iowa. As a result, Grabbe wrongly accused Gish of claiming that

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chicken lysozyme is closer to human lysozyme than is chimpanzee lysozyme. Gish then counterattacked, playing "blame the victim" and pretending it was Grabbe's own fault that he was deceived (Gish, 1985). But if the chicken lysozyme apologetic fooled a professional scientist, it is unlikely that many of the creationist listeners saw through it.

Gish's refusal to acknowledge the nonexistence of his chicken protein is characteristic of ICR. Gish's boss, Henry Morris, gave Gish's handling of the matter his tacit approval by what he said (and didn't say) about it in his *History of Modern Creationism*. Morris referred to the protein incident and took a swipe at Russell Doolittle (whom he identified as "Richard Doolittle"), but he offered no criticism of Gish's conduct. Instead, he accused PBS of misrepresenting Gish (Morris, 1984)!

Meanwhile, Gish had been obfuscating behind the scenes. The only creationist publication to directly address the protein affair has been *Origins Research*, which first covered the matter in its spring 1984 issue. Then, in the fall 1985 issue, editor Dennis Wagner revisited the controversy. However, in his article, he (1) wrongly identified Glyn Isaac as the source of Gish's bullfrog and (2) wrongly stated that Gish had sent me a tape of the lecture in which Isaac supposedly made the statement. Wagner's source, it turns out, is a February 27, 1984, letter Gish wrote to Kevin Wirth, in which Gish apparently confused the late Glyn Isaac (an archaeologist and authority on early stone tools) with Garniss Curtis. He also claimed to have a tape and a transcript of the "Isaac" (presumably Curtiss) lecture, and he claimed that he had reviewed them. In the same paragraph, Gish claimed that he had sent me his "documentation," and Wagner quite naturally assumed that that meant at least the tape. But Gish sent me neither, nor has he sent copies of said tape or transcript to others who have requested them. As with his chicken proteins, we have only Gish's word for their existence.

For the record, it is no longer important whether Gish's original statements about chicken and bullfrog proteins were deceptions or incredible blunders. It is now going on four years since the PBS broadcast, and Gish has neither retracted his chicken statement nor attempted to justify it. (Obviously, the lysozyme apologetic doesn't count, but it took Gish two-and-one-half years to come up with that!) And if the Curtis story is all he knows about his chimpanzee protein, on what basis did he promise to send me its sequence at the 1983 National Bible-Science Conference? Gish has woven himself into an incredible web of contradictions, and even some creationists now suspect that he has been less than candid.

The Paluxy Footprints

Gish's steadfast refusal to acknowledge the facts seems to characterize creationism. Consider the case of the alleged Paluxy River "mantracks." These have

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played an important role in creationist apologetics since 1961 when Whitcomb and Morris published in *The Genesis Flood* photographs of "mantrack" carvings owned by Clifford Burdick. The film, *Footprints in Stone*, features several trackways presented as human footprints in Cretaceous limestone. The ICR has long featured them in its museum, and John D. Morris, son of ICR founder Henry Morris, wrote a popular book about them. But creationism's Paluxy River apologetics are rapidly collapsing.

Glen Kuban has been investigating the Paluxy River tracks since 1980. From the beginning, Kuban noted that many of the tracks in the "Taylor trail," the principal trackway in *Footprints in Stone*, exhibited *V*-shaped splaying in the anterior and other features indicating a dinosaurian origin. In subsequent years, he conducted further studies at the Taylor site and elsewhere along the Paluxy, finding no evidence of genuine human footprints. Then, in September 1984, Kuban and Ronnie Hastings noticed that coloration patterns previously noticed on some of the Taylor site tracks had become more distinct and occurred on tracks in all four alleged human trails. The colorations, which appear to represent a secondary infilling of the original track depressions, plainly indicate the shape of the dinosaurian digits. This provided further evidence that all of the "man-tracks" on the Taylor site were actually made by dinosaurs.

Kuban discussed his findings with the ICR and Films for Christ on several occasions between 1981 and 1985, but, until recently, neither group took any steps to reevaluate the Paluxy evidence. In the fall of 1985, Kuban was finally able to persuade John Morris to join him at the Paluxy to view and discuss the evidence. Paul Taylor and other representatives from Films for Christ were included at Morris' invitation. What they saw dramatically changed their views about the Paluxy footprints.

Taylor was so impressed with what Kuban revealed that he withdrew *Footprints in Stone* from circulation. He also repudiated the "mantracks" in a two-page statement which was supposed to be sent to those requesting the film. These actions, almost unprecedented in the annals of creationism, would be more noteworthy except for four things: (1) a second, slightly watered-down statement quickly replaced the initial statement, (2) for months after Taylor's statement, Films for Christ continued to sell through the mail a booklet entitled *The Great Dinosaur Mystery* which promoted the Paluxy "mantracks," (3) Films for Christ also continued for some time to allow their films *The Great Dinosaur Mystery* and *The Fossil Record* to be rented, with no disclaimer or editing out of the Paluxy material (and unedited versions are still in circulation from other sources), and (4) according to Kuban several individuals who asked to rent *Footprints in Stone* were not sent Taylor's statement but were merely told that the film was not available "at this time" and that they should rent *The Great Dinosaur Mystery* and *The Fossil Record* instead.

As for John Morris, whose 1980 book, *Tracking Those Incredible Dinosaurs*

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. . . *and the People Who Knew Them*, is the most significant written piece of "mantrack" propaganda, he responded to the new evidence in a January 1986 *Impact* article, "The Paluxy River Mystery." It is vintage creationism.

In the article, Morris obscures the fact that all of the crucial research was done by Kuban and other noncreationists. He backhands knowledgeable critics, such as John Cole, Steven Schafersman, Laurie Godfrey, and Ronnie Hastings (collectively, "Raiders of the Lost Tracks," who published their findings this past summer in *Creation/Evolution*, issue XV), accusing them of "ignoring, ridiculing, and distorting the evidence as reported by creationists." Near the end, Kuban is mentioned in passing as the first to notice the coloration changes, but no reader could guess that it took *several years* for Kuban to convince Morris to come look at the new evidence (or that Morris may have finally done so largely because of the publicity generated by the work of the "Raiders"). Morris was allowed by Kuban to preempt publication of Kuban's original research, and he showed his gratitude by barely mentioning Kuban's name!

Nor is that all. In his windup, Morris muddies the Paluxy waters with a vague hint that the coloration might be fraudulent. While he concludes that "it would now be improper for creationists to continue to use the Paluxy data as evidence against evolution," he says nothing whatsoever about withdrawing his thoroughly discredited book from the market. (Although I was informed by Master Books on March 25, 1986, that sales of the book had been suspended, the book continues to be sold.)

In the March 1986 *Acts and Facts*, an anonymous author (presumably Henry Morris) defends John Morris' half-hearted retraction in an unapologetic apologetic. Regarding John Morris' hints about fraudulent colorations, the anonymous author of "Following Up on the Paluxy Mystery" notes that "no evidence of fraud has been found, and some hints of these dinosaur toe stains have now possibly been discerned on photos taken when the prints in question were originally discovered." Glen Kuban, who pointed out these colorations in the early photos, is not mentioned at all. Indeed, the original creationist interpretation of the trackways is characterized as "not only a valid interpretation but arguably the best interpretation of the data available at that time." The "closed-minded" evolutionists who have criticized the Paluxy tracks are mentioned only with sneer and smear.

Another creationist organization with a heavy stake in the Paluxy River footprints is the Bible-Science Association. The Reverend Paul Bartz, editor of the *Bible-Science Newsletter*, has hotly defended *Footprints in Stone* and editorially sneered at the work of the "Raiders." After Films for Christ withdrew *Footprints in Stone*, I watched the *Bible-Science Newsletter* for a reaction. Nothing. The BSA headquarters are in Minneapolis, and BSA officials are active in the Twin Cities Creation-Science Association. I attended TCCSA meetings to hear what the BSA had to say in that forum. Nothing. I privately showed BSA field director

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Bill Overn an unpublished manuscript on the tracks. About a month later, the BSA finally broke its silence.

The March 1986 *Bible-Science Newsletter* carried a column entitled "BSA Issues Statement on the Paluxy Footprints." The statement, which is in the form of a press release, ignores Kuban and the "Raiders" altogether, referring only to John Morris' *Impact* article. It quotes a statement by Morris affirming his commitment to truth and facts, commenting:

> Our stance is identical. Our readership is different, however, and expects us to present a more studied and mature documented position. The Bible-Science Association is currently engaged in an evaluation of current data as well as the exploration of additional data which has not yet been fully examined.

Any serious study of the matter, of course, would have to begin with Glen Kuban, whose research blew the lid off *Footprints in Stone*. Shortly after *Bible-Science Newsletter* came out, I called Kuban and asked if he had been contacted by the BSA. He hadn't. It's not clear how a "more mature documented position" on the Taylor tracks can be presented without contacting the man most knowledgeable about them. But perhaps the BSA writer gives a hint of things to come with the next sentence:

> We also point out to our readers that current questions concerning the value of the Paluxy findings do not revolve around the question of whether any kind of evidence *ever* existed to support the contention of contemporaneous human and dinosaur existence in the Paluxy River bed. [Italics original]

I might similarly point out to my readers that current questions concerning the value of perpetual motion machines do not revolve around the question of whether any kind of evidence *ever* existed for machines which could create energy from nothing. I prefer to point out that such an argument is bankrupt and, therefore, precisely the kind of apologetic to which perpetual motionists and creationists must resort.

The BSA statement also neglected to mention three important claims the BSA itself has made about alleged Paluxy River mantracks:

1. The BSA, which has been lavish in its praise for *Footprints in Stone*, failed to inform its readers that Films for Christ has withdrawn it from circulation because it misidentifies dinosaur tracks as human.
2. The BSA has been the foremost promoter of the Reverend Carl Baugh and his alleged human footprints. Baugh has been strongly criticized by the "Raid-

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ers." Knowledgeable creationists now recognize that Baugh's "mantracks" are probably spurious. Two BSA insiders told me privately that they have had their doubts about Baugh for some time and that they no longer actively promote him in the *Bible-Science Newsletter*. Yet, no hint of Baugh's fall from grace has reached subscribers.

3. The BSA has long promoted as genuine an alleged giant human track known as "the Caldwell print," and they even sell aluminum casts of it. Besides its anatomical absurdities, knowledgeable creationists have recently alleged that it is a carving. The BSA statement says nothing whatsoever about this.

For now, at least, it is whitewash as usual from the Bible-Science Association. If the past is prologue, the *Bible-Science Newsletter* will eventually acknowledge the action by Films for Christ, and they might quietly quit distributing the Caldwell print (if they haven't already). But they will never blow the whistle on the Reverend Carl Baugh's misrepresented discoveries, pretentious claims, and general scientific incompetence.

With these bad examples in mind, it is hardly surprising that the ICR continues to promote errors refuted more than a decade ago. Those who take the time to reply to creationist attacks on science find themselves slaying the slain a thousand times over. And no matter how dead a creationist error might appear to be, it always has the hope of resurrection in creationist publications.

Creationism is not monolithic. Nevertheless, creationism as a movement is and ever will be judged by the most visible organizations and individuals. On that basis, the public can only conclude that the typical creationist response to error is silence, whitewash, or outright denial. If some creationists are offended by this interpretation (and several have told me privately that they are), I refuse to be their spokesperson. Those creationists who cannot denounce these actions on their own become participants by their silence.

References

Awbrey, Frank T., and Thwaites, William M. Winter 1982. "A Closer Look at Some Biochemical Data That 'Support' Creation," *Creation/Evolution*, issue VII, p. 15.

Gish, Duane T. August 14, 1985. "Creationism Misassailed." *Cedar Rapids Gazette*.

Morris, Henry M. 1984. *History of Modern Creationism* (San Diego: Master Book Publishers), p. 316.

Schadewald, Robert J. February 14, 1985. "The Gospel of Creation: The Book of Misinformation." *Minnesota Daily*, volume 86, number 112, p. 7.

Weber, Christopher Gregory. Winter 1981. "The Bombardier Beetle Myth Exploded." *Creation/Evolution*, issue III.

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A Summary of the Taylor Site Evidence

Glen J. Kuban

Reports of giant, fossilized human tracks occurring alongside dinosaur tracks in the Paluxy riverbed near Glen Rose, Texas, began circulating among Glen Rose residents in the early part of this century. The Paluxy "mantrack" claims were supported by creationist geologist Clifford Burdick during the 1950s and became widely known after being discussed in the book, *The Genesis Flood* by John Whitcomb and Henry Morris (1961). In the mid-1960s, these claims came to the attention of the Reverend Stanley Taylor (since deceased), of Films for Christ Association, who decided to find and film the "giant mantracks" as part of a documentary on the creation-evolution controversy (Taylor, 1968).

In 1968, Taylor and his crew found various oblong marks which they thought were human tracks. Seeking more evidence, Taylor returned in 1969 and 1970 to excavate an area now known as the Taylor site, located a few hundred yards west of Dinosaur Valley State Park (Taylor, 1971). On this site were found many elongate impressions which Taylor considered to be definite human tracks, as well as other tracks acknowledged to be dinosaurian. In 1972, Taylor released the film, *Footprints in Stone*, which prominently featured the Taylor site "mantracks."

The Taylor site contains a long trail of deep and robust tridactyl dinosaur tracks, as well as several shallower trails, four of which were claimed to be human: the Taylor trail; the Giant Run trail; the Turnage trail; and the Ryals trail, which contains a large hole reported to be the spot from which a human track was removed by Jim Ryals during the late 1930s (Taylor, 1971). Many of the tracks in these trails were more or less oblong in shape and did not match the shape of any dinosaur tracks known to the Taylor crew. Some of the tracks did somewhat resemble human footprints; however, many also showed anterior

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Glen Kuban has a B.A. in biology and has worked in the computer field. He is scheduled to give two papers, based upon his Paluxy research, at the First International Symposium on Dinosaur Tracks, to be held in New Mexico in May 1986.

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splaying and other problematic features (discussed later on). Nevertheless, Taylor suggested that the shapes of the tracks were unlike the feet of any Cretaceous animal and could only have been made by humans. Some of the tracks were even claimed to show indications of human toes. Subsequently, the Taylor site "man-tracks" were cited in numerous books, articles, and tapes and were hailed by many creationists as one of the most dramatic evidences against the theory of evolution.

Those who supported the human-footprint interpretation of the Taylor site tracks emphasized that the tracks could not be carvings or erosion marks since at least part of the site was excavated from under previously undisturbed strata and many of the tracks had mud "push-ups." Further, three of the elongate trails intersected the deep dinosaur trail, providing clear evidence that the makers of both types of tracks walked through the area at approximately the same time.

However, not all creationists agreed with Taylor's interpretations. Even before Taylor's film was released, the Taylor site was studied by a team of creationists from Loma Linda University (Neufeld, 1975), who reported that several of the tracks in the Taylor Trail showed indications of dinosaurian digits and concluded that the tracks were probably eroded remains of three-toed dinosaur tracks (although they did not adequately explain the elongate nature of the tracks). Other creationists, including Dr. Ernest Booth of Outdoor Pictures, Inc. (1981), and Wilbert Rusch, president of the Creation Research Society (1971, 1981), also visited the site soon after it was first exposed and expressed skepticism about the "mantrack" claims.

Nevertheless, the impact of Taylor's film and other creationist works which promoted the "mantrack" claims led to wide acclaim for the Taylor site among creationists. At the time, most evolutionists familiar with these claims apparently did not feel that they were worth careful investigation and typically dismissed them with one or more generalizations. Some suggested that all the "mantracks" were carvings or erosion marks. Others attributed them to middle digit impressions of bipedal dinosaurs or mud-collapsed specimens of typical tridactyl dinosaur tracks. Although some of these explanations did pertain to alleged human tracks on other sites, none of them adequately explained all the features of the Taylor site "mantracks."

During the 1970s, several other creationist teams re-exposed the site and found some previously unrecorded tracks, but most of the members of these teams reaffirmed that the elongate tracks were human or humanlike (Beierle, 1977; Dougherty, 1977; Fields, 1980). John Morris of the Institute for Creation Research was involved in some of the Paluxy work during the late 1970s and, in 1980, published a book supporting many of the "mantrack" claims. He argued that the elongate tracks on the Taylor site were clearly human.

I began my own field study of the Taylor site in 1980 as part of an intensive study of all Paluxy sites alleged to contain human tracks. Although working

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largely independently, I have cooperated in my research with a number of other investigators, including Tim Bartholomew (who worked with me in 1980) and Ronnie Hastings (with whom I have worked closely during the past two years).

After thoroughly exposing and cleaning the Taylor site during a drought in the summer of 1980, Bartholomew and I took many measurements and photographs of the tracks and made several rubber casts. We noted that many of the alleged "mantracks" did have a general oblong shape, rounded heel, and mud push-ups around the back and sides of the track but that they differed in significant ways from what would be expected from genuine human tracks. Most splayed into a wide "V" at the anterior, and some showed long, shallow grooves at the anterior in positions that were incompatible with a human foot. The anterior of the tracks thus appeared to indicate a tridactyl (dinosaurian) foot, but the long posterior extension was puzzling and seemed inconsistent with the Loma Linda team's suggestion that these tracks merely represented eroded specimens of typical tridactyl dinosaur tracks. Pondering all the features of the tracks, I hypothesized that, rather than walking in the normal digitigrade (toe-walking) manner of most bipedal dinosaurs, they may have been made by a dinosaur that walked in a plantigrade or quasi-plantigrade fashion, placing weight on the soles of its feet and thereby creating elongated impressions. This would account for all of the features of the tracks, with the lack of distinct digit impressions being attributable to any of several possible phenomena, such as erosion, initially indistinct impressions (due to a firm substrate), or a combination of factors.

That dinosaurs were capable of making elongated impressions by impressing their metatarsi into the sediment was confirmed by my documentation in 1982 and 1983 of another Paluxy site, bordering the Alfred West property, about a mile south of Dinosaur Valley State Park. On the West site were many typical tridactyl tracks and, more significantly, several trails containing elongate dinosaur tracks with rounded heels. Many of the elongate tracks on the West site showed three dinosaurian digits (*see* FIGURE 1), whereas others—in the very same trackways—exhibited only indistinct digit impressions (*see* FIGURE 2). In some cases, the digit impressions were largely or entirely obscured (in most cases this appeared to be the result of mud back-flow or erosion), leaving oblong depressions which superficially resembled human footprints. Some of the trails containing elongate tracks also contained tracks showing little or no elongation, apparently indicating that the dinosaur would sometimes alter the extent to which it impressed its metatarsi into the sediment. These trails clearly demonstrated that dinosaurs were capable of making elongate, even humanlike prints. Alfred West had known about these tracks for many years and had suspected that they related to many of the "mantrack" claims, but, prior to 1982, no thorough study of the West site had been made.

John Morris once visited the West site (which he calls the "Shakey Springs" site) and includes photographs in his book showing some of the elongated dino-

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saur tracks on this site that show distinct digit impressions. However, he either did not notice or neglected to mention that the site also contains elongate dinosaur tracks which do not show distinct digits and, oddly enough, did not even hint that these elongate dinosaur tracks might be related to the renowned "mantracks" on the Taylor site.

Although these metatarsal-type dinosaur tracks in the Paluxy have been overlooked or misidentified by most researchers for decades, they are fairly common in the Glen Rose area and are probably the source of the initial reports of "giant mantracks" in the Glen Rose area. In addition to the numerous trails of elongate dinosaur tracks on the West and Taylor sites, these metatarsal- or "metapodial"-type dinosaur tracks also occur on other Paluxy sites. In cases where the digits are not distinct, they often have been mistaken for human footprints. The digit impressions can be caused by any of several phenomena, including erosion, mud-collapse, infilling, or a combination of factors, resulting in indistinct oblong depressions, somewhat wider at the front than at the back and thus more or less resembling giant human footprints (*see* FIGURE3). Erosion marks and other misinterpreted phenomena have also contributed to "mantrack" claims on other Paluxy sites; however, the metatarsal dinosaur tracks produce the most "manlike" tracks, complete with left-right steps, rounded "heels," mud push-ups, and the proper "giant" size. Indeed, the distinct specimens of elongate dinosaur tracks typically range from twenty-one to twenty-seven inches in length; however, when the digits are obscured, they typically range from fifteen to twenty inches in length—the same size range as the reported "giant mantracks."

It is not yet known what dinosaur species made these elongated tracks or whether the metatarsal-type tracks represent true plantigrade locomotion or merely occasional or aberrant behavior. Elongated dinosaur tracks of various sizes and shapes have been reported from numerous other sites around the world. Many of these other elongate tracks also seem to represent metatarsal impressions.

In September 1984, Ronnie Hastings and I extended the documentation of the Taylor site, finding some new and startling evidence to confirm that the Taylor site "mantracks" were in fact elongated dinosaur tracks. Coloration patterns that were previously noticed on some of the tracks had become more distinct and were visible on most of the other tracks as well. These colorations ranged from blue-grey to rust, in contrast with the ivory to tan color of the surrounding limestone. On many of the tracks, including the alleged mantracks, the colorations clearly defined the shape of dinosaurian digits. These colorations occurred on tracks that already showed anterior splaying or shallow tridactyl indentations as well as on other elongate and nonelongate tracks that showed only slight relief differences with the surrounding substrate. These features suggested that the frequent lack of distinct digit indentations was due, at least in part, to an infilling of the original impressions with secondary sediment which later hardened

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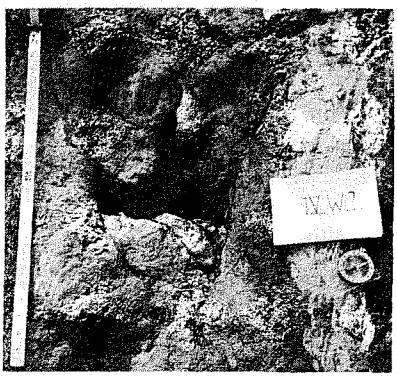
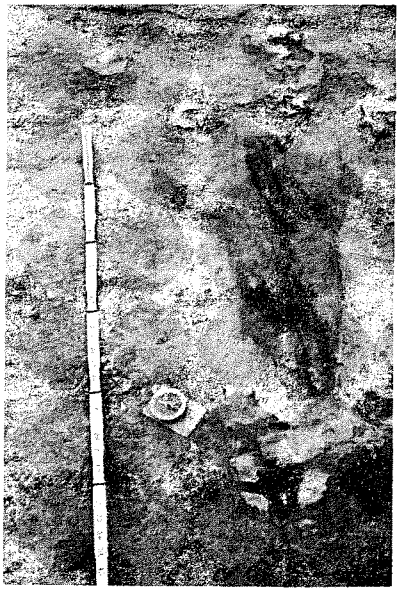


FIGURES 1 AND 2. Two parts of the IVW trail from the Alfred West site, photographed in 1983. Note the clear tridact pattern in FIGURE 1 and the more elongate, humanlike shape in FIGURE 2. Being in the same trail, these tracks were obviously made by the same dinosaur.



FIGURES 4 AND 5. Upriver of Taylor trail, facing west. In FIGURE 4, track +4 is in the lower portion, track +5 in the upper. Note anterior splaying on both and distinct coloration pattern on +4. FIGURE 5 is a close-up of track +4 under shallow water. Photographed in 1984 and 1985, respectively.

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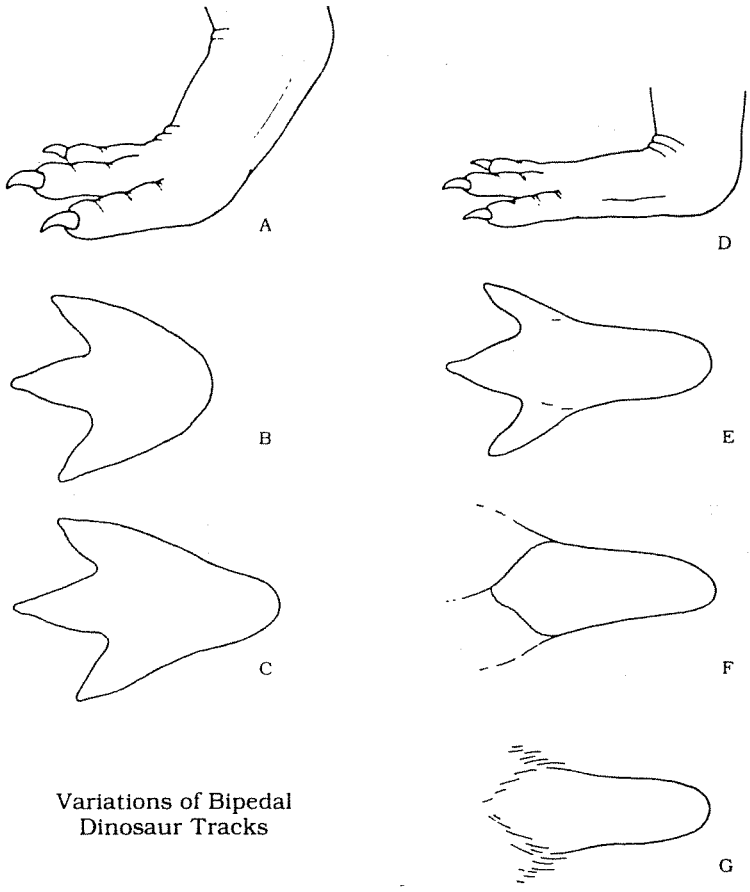

Variations of Bipedal Dinosaur Tracks

A Generalized dinosaur foot in digitigrade (toe-walking) stance.

B Typical bipedal digitigrade dinosaur track. Other digitigrade dinosaur tracks have more pointed or more blunt toes, or other variations.

C Bipedal dinosaur track showing partial metatarsal impression.

D Generalized dinosaur foot in plantigrade stance.

E Elongate dinosaur track exhibiting full metatarsal impression. Other metatarsal type tracks are more gracile or robust. Some have obscured digit impressions (F and G).

F Elongate dinosaur track with digit impressions obscured by mud back-flow. Note resemblance to human footprint.

G Elongate dinosaur track with indistinct digits. May be due to a firm substrate, erosion, infilling, or a combination of factors. Note resemblance to human footprint.

FIGURE 3

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(as opposed to the West site, where the lack of distinct digits on some of the elongate tracks seems to be due primarily to mud back-flow and erosion).

The colorations on the Taylor site tracks have been getting progressively more distinct during the past few years. Apparently the infilled material is undergoing a chemical reaction that is increasing its contrast with the surrounding substrate. Preliminary study of rock samples from these tracks supports the hypothesis that the blue-grey material represents an infilling of the original track depressions and that the rust color represents an oxidation of iron on the surface of the infilled material. This agrees well with the observation that the tracks bearing blue-grey coloration are on the lower parts of the site and at the bottoms of some tracks, and that the rust colored tracks occur on the higher parts of the site which have been above water and exposed to air more frequently. This would accelerate oxidation. Further, some tracks that were formerly bluish in color have become more brownish and rust-colored and some are now entirely rust-colored.

Almost every track in the Taylor trail shows these colorations, as well as anterior splaying, which clearly indicate a tridactyl dinosaurian foot (FIGURES 4 and 5). The tracks known as the Turnage trail (which actually appears to involve two trails) are somewhat smaller and less elongate than the Taylor trail tracks but also show indentations and colorations in the form of dinosaurian digits. The Giant Run tracks near the bank are indistinct, but others directly in line with them show dinosaurian digits. Several of the Ryals tracks show tridactyl colorations as well as relief and fissure patterns, indicating a dinosaurian foot. Thus, there is abundant evidence that all of the Taylor site trails once claimed to be human were actually made by dinosaurs.

In 1984 and 1985, Hastings and I also mapped a large number of previously overlooked tracks on the Taylor site that are now visible by virtue of the color phenomenon—that is, many of these newly documented tracks are defined primarily by the color distinctions rather than by significant indentations in the rock surface. Included among these newly documented trails is a long sequence of blunt-toed tracks which we have named the "A" trail and the continuation of another trail, the "II-DW" trail, which was formerly thought to be a short, eroded trail of typical tridactyl tracks but is now revealed to be a long trail of elongate dinosaur tracks.

That the colorations represent a genuine phenomena and not a "painting" hoax is indicated by several lines of evidence. These include: the preliminary study of rock samples; the observation that the blue-grey material differs in both color and texture from the surrounding limestone; the raised tracks and indentations which coincide with the colorations; the observations that small fissures in the rock surface often correspond with the coloration borders; that many of the colorations have become more distinct during the past year (while the entire site has been under water); and that the colorations are now visible on over one hundred tracks on the Taylor site, representing at least twelve separate trails.

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That the colorations were overlooked initially may be due to a number of possibilities, including the failure of many investigators to thoroughly clean the tracks (any sediment or algae not completely scrubbed off the rock surface hides these features), the less distinct nature of the colorations in years past, and the possibility that, when first exposed, some of the tracks may have been covered with a thin veneer of limestone that has eroded off in recent years. This latter possibility is suggested by the fact that, when the site was first exposed, the Taylor trail tracks at the lower end of the site were not even reported. However, a close inspection of some frames of the Taylor film and photos from the Loma Linda team and other early researchers shows that indications of the coloration were present at least on some of the tracks even when they were first exposed.

The colorations provide strong confirmation that all the trackways on the Taylor site are dinosaurian. Even before these colorations became more prominent, the tracks did not merit a human interpretation. Not only did the Loma Linda team, Booth, and others observe dinosaurian features soon after the original excavation but nonhuman features on the "mantracks" can even be observed in Taylor's film: if one watches carefully, the anterior splaying and indications of the color patterns are visible on some of the Taylor trail tracks in the distant shots of the upriver end of the site and in some of the close-up shots (of which few were shown of the Taylor site tracks). Morris states on page 97 of his book that the Taylor trail tracks showed no evidence of dinosaurian origin, yet photos of these tracks on pages 204 and 205 of his book show examples of anterior splaying and other problematic features.

I recently challenged the Institute for Creation Research to come to Glen Rose to reexamine the "mantracks" on the Taylor site. In response, John Morris and representatives of Films for Christ met me in October and November of 1985 at the Paluxy sites where we viewed and discussed the evidence together. Shortly after these meetings, the ICR published an article in *Impact* which, while omitting a frank retraction of past claims, did acknowledge that "none of the four trails at the Taylor site can be today regarded as unquestionably human" (Morris, 1986). Also, Films for Christ has taken *Footprints in Stone* out of circulation (Taylor, 1985).

Besides the elongate dinosaur tracks, other alleged "mantracks" in the Paluxy have involved other misinterpreted phenomena, including: erosion and natural irregularities of the rock surface; severely eroded specimens of typical tridactyl tracks; partial metatarsal impressions (interpreted by Carl Baugh, a recent "mantrack" promoter, as human tracks overlapping dinosaur tracks); indistinct oblong marks associated with dinosaur trails (apparently indicating a drag or swish mark of the dinosaur's tail, snout, or digit); and a few outright contrivances (Cole, Godfrey, Hastings, and Schafersman, 1985; Kuban, 1986). After over five years of intensive research on this issue, I have concluded that no genuine human tracks have been found in the Paluxy riverbed.

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Afterword

I would like to clarify my position on the creation-evolution controversy and my reasons for researching and reporting on the Paluxy evidence.

I prefer not to be labed a *creationist* or an *evolutionist*, since I do not fully identify with all of the tenets often assumed to typify each camp. I am a Christian and believe in the Creator but have not yet formed definite conclusions about some aspects of the origins controversy, such as the exact age of the earth or the limits to biological change. However, on some issues that I have studied in depth, such as the Paluxy controversy, I have formed definite conclusions, as explained in this article. I chose to publish my research in *Creation/Evolution* not to attack creationism but to help set the record straight on the true nature of the Paluxy evidence.

References

Beierle, Fred. 1977. *Man, Dinosaurs, and History*. Prosser, WA: Perfect Printing Co.

Booth, Ernest. 1981. Personal communication.

Burdick, Clifford C. July 25, 1950. "When Giants Roamed the Earth." *Signs of the Times.*

Cole, John R., Godfrey, Laurie R., Hastings, Ronnie J., and Schafersman, Steven D. 1985. "The Paluxy River Footprint Mystery—Solved." *Creation/Evolution*, issue XV.

Dougherty, Cecil N. 1979. *Valley of the Giants* (Cleburne, TX: Bennett Printing Company), sixth edition.

Fields, Wilbur. 1980. *Paluxy River Exploration: 1977–79* (Joplin, MO: privately printed by Wilbur Fields), revised edition.

Kuban, Glen. 1986. *The Paluxy Man Track Controversy.* (Brunswick, OH: privately published by Glen Kuban).

Morris, Henry M., and Whitcomb, John C. 1961. *The Genesis Flood* (Grand Rapids, MI: Baker Book House), pp. 173–175.

Morris, John D. 1986. "The Paluxy River Mystery." *Impact*, 15:1.

———. 1980. *Tracking Those Incredible Dinosaurs . . . and the People Who Knew Them* (San Diego: Creation-Life Publishers).

———. 1976. "The Paluxy River Tracks." *Impact*, 35.

Neufeld, Berney. 1975. "Dinosaur Tracks and Giant Men." *Origins*, 2:2:64–76.

Rusch, Wilbert H., Sr. 1981. Personal communication.

———. 1971. "Human Footprints in Rock." *Creation Research Society Quarterly*, 7:4:201–213.

Taylor, Paul S. 1985. "Notice Regarding the Motion Picture *Footprints in Stone*" (Mesa, AZ: Films for Christ Association), Form N-6, dated December 4, 1985, revised December 5, 1985.

Taylor, Stanley E. 1972. *Footprints in Stone.* A film by Films for Christ Association, Elmwood, IL.

———. 1971. "The Mystery Tracks in Dinosaur Valley." *Bible-Science Newsletter*, 9:4:1–7.

———. 1968. "Search for Man Tracks in the Paluxy River." A special report from Films for Christ Association, Elmwood, IL.

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Tracking Those Incredible Creationists— The Trail Continues

Ronnie J. Hastings

To the ethnography and analysis of creationist Paluxy River claims in issue XV of *Creation/Evolution* (Hastings, 1985), the following events are added.

February 10, 1985. Steven Schafersman, Frederick Edwords, William Thwaites, James Cunliffe, and I visited the Reverend Carl Baugh's Creation Evidences Museum along with Walter Bradley and Roger Olsen, coauthors with Charles Thaxton of the pro-creationist book, *The Mystery of Life's Origins*. Baugh was not present, but a member of the Bob Summers family (local supporters of the reverend's efforts) was kind enough to open up the museum for us. Schafersman and I noted little change from the previous summer in the little cabin, save the absence of Baugh's guiding audiotape and the presence of a second dinosaur bone marking his second dinosaur find. All of us were allowed to closely inspect not only the alleged Cretaceous trilobite, supposedly found in the Paluxy riverbed, and the Moab bones but also the sectioned Burdick carvings which originally fooled Clifford Burdick decades ago into thinking that there were mantracks near Glen Rose. The hammer-in-stone was not on display; only a photo of it was hung on a wall.

We also briefly visited the McFall site, where months of inactivity and neglect left many features covered in silt and debris. I was able to point out to the group the approximate position downstream of the Taylor site where Glen Kuban, several students, and I worked months before to expose the identity of the trails there—approximate, because returning rainfall had long since recovered the many dinosaur prints with sediment and flowing water.

February 25, 1985. Gayle Golden, science writer for the *Dallas Morning News*,

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published her article on Baugh's work (Golden, 1985) after many hours interviewing not only Baugh but other creationists who are not so sympathetic with Baugh's work (for example, Gerhard Nickle and John Morris). Other critics interviewed were Al West, Glen Kuban, Frederick Edwords, Steven Schafersman, and I. Reactions to the article ranged from Kuban's feeling that Baugh's work was not criticized enough nor in sufficient detail to Baugh's view that he had been "slaughtered." Baugh accused his critics of launching a "humanist" attack on him, neglecting the criticisms of his fellow creationists and other critics having no humanist connections.

March 30, 1985. Stephen Jay Gould, Harvard professor of geology and co-developer of the theory of punctuated equilibrium, accepted my invitation to visit the sites of the Glen Rose mantrack claims. We toured the ledge in Dinosaur Valley State Park, the McFall site, and the Creation Evidences Museum. Accompanying us were Gayle Golden, James Cunliffe, and Clifton Barr. Concerning the features on the sites not covered by silt and mud, Gould was amazed how so little and so poor evidence could be the source of so much excitement among creationists. He also emphasized how telling it was that evidence of such alleged importance was in no way protected or properly documented.

Despite attempts to contact him, Baugh was not available to meet Gould at the creationist museum. Again the Summers family made it possible for our group to view the exhibits close up. Notably absent was the alleged Cretaceous trilobite. (A simple test to see if the fossil was actually limestone or dolomite—using a drop of weak hydrochloric acid and observing the resulting effervescence—had been proposed by Troy L. Pewe, professor of geology at Arizona State University, in the January/February 1985 issue of *Creation/Evolution Newsletter* [Pewe, 1985]. The acid test would help determine if the trilobite was accidentally dropped or was deliberately planted or "salted" in the Paluxy limestone. Paluxy limestone is 100 million years old, while no trilobite fossils occur in deposits younger than about 225 million years.) James Cunliffe and I also noted that Baugh's museum seemed to be in a state of neglect compared to when we had seen it about seven weeks before. This stood in stark contrast to Baugh's multi-million-dollar plans for further phases of his museum (Golden, 1985) and the considerable material support he is supposed to be receiving (Lang, 1985).

June 1, 1985. Wann Langston, paleontologist from the University of Texas at Austin, asked me to guide a tour of the Dallas Geological Society to the "mantrack" sites as part of the group's field trip. After a look at the park ledge tracks, the entire two busloads making up the group disembarked at the McFall site, where, to our surprise, Baugh was working with a new crew. (Through the years, the turnover among his helpers has been phenomenal!) They were removing limestone slabs atop marl and the lower limestone layer, trying to find new tracks.

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Baugh made sure that we could hear him caution his group about not altering with their grubbing hoes the limestone beneath the limey clay marl they were removing. (A growing number of Baugh's critics, including Laurie Godfrey, John Cole, Schafersman, West, and I, had cited how the marl was not easily distinguished from the underlying limestone, which, in turn, could be chipped by careless wielding of tools.) As Baugh moved away from his group to meet Langston, I heard one of the work crew ask another what marl was, indicating that Baugh's scientific jargon was for our benefit only.

The geological group gathered within earshot of Baugh's crew, where Langston and I talked about the site through a hand-held amplified speaker. Thus did Baugh hear me criticize his claims. In response, he asked for "equal time." When granted it, he told the group of his "mantracks" whose traces have since disappeared; he waffled on calling the cavity before all of us (FIGURE 11 in Godfrey, 1985) his *best* and *first* "mantrack." I asked him, after he had finished, what had happened to the plaque that used to be attached to a nearby limestone slab identifying the "Wilsonian strata" and "Humanus Bauanthropus." He said Clifford Wilson took it for a "souvenir."

Later, after the tour group had left, the Reverend Baugh told me that his dinosaur fossil had been radiocarbon dated ("washed in two solutions," as he put it) at thirty-nine thousand to forty thousand years. Aside from the fact that one does not use carbon dating to determine the age of dinosaur fossils, Baugh did not blink at the discrepancy between this age and his own ten-thousand-year figure for the creation of the earth. Furthermore, he did not show the same willingness to radiocarbon date the wooden handle of his hammer-in-stone. Nonetheless, I urged him to try and publish these datings, and he indicated that he would.

July 15, 1985. *Creation/Evolution* XV was released, completely devoted to the research of Godfrey, Cole, Schafersman, and Hastings on the Paluxy River "mantracks." Carl Baugh at this time announced his plans to dig again in late July.

July 31, 1985. In response ot issue XV of *Creation/Evolution*, Mary Ann Krebs of the *Waco Tribune-Herald* interviewed separately both Baugh and me in Glen Rose (Krebs, 1985). However, Baugh and I did converse briefly at the McFall site, at which time Baugh was not anxious to talk with me. He announced that he had just found "a headcrest bone" at the same site upriver where he had previously found the dinosaur bones still stored at his museum. However, when I checked this "headcrest" at the bone site later on that afternoon, the fossilized specimen was so featureless that any identification was difficult at best, though it did have the appearance of the genuine bones found nearby.

Baugh's museum had changed its housing, the contents having been transferred from the quaint little cabin to a quonset hut.

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August 15–20, 1985. Glen Kuban and I spent several days cleaning and mapping the eight to ten dinosaur trails at the McFall site that had been exposed by Baugh's work since 1982. We were, on different days, joined by students Brian Sargent and Tim Smith, as well as by Clifton Barr. As we looked at the trails as whole entities, the pattern of so many of the "mantracks" consistently appearing as depressions made by some appendage (tail or forelimb) became very notable. With independent sets of data, Kuban and I hoped our work would contrast with the lack of such documentation on Baugh's part. At one point during his visit, Kuban asked Baugh to identify on Kuban's McFall site maps the locations of alleged mantracks. Baugh was unable to do this consistent with his previous claims. Baugh said that he had a stack of maps back in Missouri, that they were not with him in Texas. Significant to years of observation of the McFall site was the fact that dinosaur prints exposed in 1982 were still clearly identifiable, although somewhat eroded. The dinosaurian features seemed more resistent to erosion than the quickly disappearing "human" features in friable, clayey fill.

The Taylor site just downriver was not as "high and dry" as a year previous, but many of the Taylor trail prints were still clearly visible, claw-shaped discolorations and all, in very shallow and receding water. Also nicely exposed in Dinosaur Valley State Park by the very low water level were the excellent and rare sauropod tracks near the park ledge site first made famous by Roland T. Bird. I videotaped for the first time the West site, where many elongate dinosaur prints, similar to those found at the Taylor site and a few at the McFall site, abound. A depression pattern alongside a dinosaur trail was also found, similar to the "mantracks" at the McFall site.

During our August work together, Kuban began wondering whether representatives from the ICR might come and look at the Taylor site if they knew the essential content of his planned monograph that would detail our findings. He had previously issued invitations to John Morris, all of which had been declined. Kuban telephoned Morris directly, inviting him once again to come to the Paluxy while we were on site, but again Morris declined. When Kuban then suggested to me that he write a letter to Morris, outlining the evidence that would go into the monograph, I encouraged him to do so.

August 26, 1985. I met and guided a group from the geology department of the University of Alabama at Birmingham, which included both students and faculty. Scott Brande of the department had previously made the arrangements with me. After we toured many of the dinosaur and "mantrack" sites in the state park and at the McFall and Taylor sites, Baugh arrived at the McFall site with his own group to guide. I was invited to any future excavations Baugh would do. He seemed confident that there would be more, despite evidence that his financial support was waining.

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September 5, 1985. Glen Kuban sent John Morris a lengthy and detailed letter, complete with photographs, setting forth the evidence for dinosaurian origin of the Taylor site trackways. Kuban had consulted me previously via a number of phone calls concerning the content of this letter. We were both eager that it have a beneficial effect, and it was carefully prepared with that in mind. Copies of this letter were sent to Henry Morris, Duane Gish, Steve Austin, and Harold Slusher, all members of the ICR staff.

The response to this letter was pleasantly rapid. The ICR delegated John Morris to be its representative, and Morris agreed to meet Kuban in early October in Glen Rose. Morris contacted Marian and Paul Taylor (widow and son, respectively, of Stanley Taylor of Films for Christ) and invited them along. But Morris was not anxious to meet me, Steven Schafersman, or other members of Laurie Godfrey's team (the "Raiders of the Lost Tracks," as we had called ourselves) who had so recently published refutations of the "mantrack" claims in *Creation/Evolution*. So, in the interest of getting for Kuban a more open response from Morris, I agreed not to meet with the visiting creationists, even though I was going to be in Glen Rose at the appointed time anyway, meeting with Indiana paleontologist Dr. James Farlow and Steven Schafersman.

October 3, 1985. Creationists John Morris, Marian and Paul Taylor, Tom Henderson, and Marvin Hermann—all of whom had aided the late Stanley Taylor in his work uncovering the Taylor site—met Glen Kuban in Glen Rose. Together they visited the Taylor site several times and discussed the evidence at length. According to Kuban, all these visitors seemed astounded at what they saw. Taylor suggested taking *Footprints in Stone* out of circulation, but John Morris seemed more defensive about the positions in his book, especially as Kuban kept reminding him of the evidence Morris had just seen. Eventually, Morris conceded some points to Kuban, stopping short of making definite statements about dinosaurian origins of trails other than the Taylor trail and short of abandoning erroneous "mantrack" claims of the past. Paul Taylor seemed more willing to accept the consequences of what they were seeing. Particularly vexing to the creationists were the faint but visible color distinctions Kuban pointed out in photographs taken when the Taylor film was in production—distinctions that revealed the dinosaurian nature of tracks at the Taylor site as photographed back in the 1970s.

Attempts were made by Morris to question anything that could allow the creationists to deny what was before their eyes. In response, Kuban patiently but firmly confronted them with the evidence time and again and allowed them to discover for themselves that he was right. The Turnage tracks were uncovered to show a dismayed Morris their tridactyl depressions. By November, all the creationists present agreed at least that the Taylor trail had been made by a dinosaur. Kuban asked Morris for a statement from the ICR to accompany Kuban's forth-

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coming monograph, a request to which Morris seemed to respond favorably.

October 4, 1985. James Farlow and Steven Schafersman visited the Taylor site with Kuban and me as their guides. Kuban and I had been explaining to them for some time the new insights about dinosaur locomotion that the Taylor site seemed to bring to light. To us, the Taylor, II-DW, and Giant Run trails suggested that the dinosaurs who made them walked not only on their toes (digitigrade) but also dropped down on their metatarsals (plantigrade) with the equivalent of their "heels" touching the lime mud. James Farlow had searched the literature on dinosaur trails and found that elongate dinosaur tracks, such as are common at the Taylor site, were not as rare as he, Kuban, and I had originally assumed. I had even found a short dinosaur trail just downriver from the Taylor site containing both plantigrade and digitigrade depressions without color distinctions. Kuban had previously documented many elongate dinosaur tracks at the West site. Some long and narrow dinosaur tracks, with shallow but distinct tridactyl toe depressions, exposed by Baugh's work at the McFall site, resembled the elongate tracks of the Taylor site. But only when Farlow and Schafersman saw the Taylor site for themselves, in shallow water, did they agree completely with a metatarsal explanation and confirm the plausibility of the plantigrade hypothesis. Farlow did, however, suggest that the phenomenon could possibly be the result of aberrant walking, but the frequency of the phenomenon makes this hypothesis less plausible. Schafersman expressed reservations about the idea that all the elongate dinosaurian tracks in the Paluxy River area might be explained by our hypothesis. There may be other causes for similar phenomena on some of the other sites.

October 14, 1985. I took small samples of rock with color distinctions from the II-DW and "R" trails at the Taylor site. These I later sent to Jim Farlow and Wann Langston for lab analysis.

October 25–27, 1985. Glen Kuban was back in Glen Rose for the Fossilmania fossil show. Al West also attended. The two independently noticed trilobite specimens remarkably like the specimen claimed by Carl Baugh to be from Glen Rose limestone. These specimens were found in Niagaran limestone in the Joliet formation near Grafton, Illinois, being Silurian in age (430 to 395 million years before the present) and distinctive from other trilobite fossils in that they were found in dolomite. This distinction, making identification very easy (Pewe had identified Baugh's specimen from a photograph), coupled with the obvious similarities between the Fossilmania specimens and Baugh's fossil, suggested the same origin for all these trilobites and ruled out the possibility of any being from Glen Rose limestone.

Kuban bought one of the Fossilmania specimens, and I tried Pewe's suggested "acid test" on it for corroborative purposes. Just as Pewe had described,

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weak hydrochloric acid hardly bubbled on the surface of the trilobite specimen's dolomite, whereas the same acid produced brisk effervescence on one of my fossil specimens of Glen Rose limestone.

"Foreign" fossils, such as the Fossilmania trilobites, have been readily available to Glen Rose residents and visitors for years through fossil shows. That such a specimen was misplaced along the Paluxy riverbed or purposely "salted" there seems highly probable and may account for its eventual fall into Baugh's hands.

November 1–3, 1985. During a visit to the Taylor site, Kuban was surprised to find Morris and Henderson there. They told him they had come for "another look," and Kuban accompanied them back to their motel as rainfall increased. It turned out that Paul Taylor was also there at the motel, sick with the flu.

On November 2, Kuban, Morris, Henderson, and Taylor returned to the Taylor site, this time with a glass aquarium Morris had to aid in "taking cores" of the color distinctions. They were joined by Billy Caldwell and others. Kuban suggested that they use the aquarium to see more directly the Ryals, Giant Run, and Turnage tracks which were under water. This worked well, and the tridactyl nature of the tracks was made visible to everyone.

Morris, during later phone calls, suggested the possibility that the color distinctions had been painted or dyed on by human activity. Kuban promptly reminded him that the entire site had been under water for a year, that there are more than a hundred color distinctions on the site arranged in dinosaurian dimensions and proportions, with more appearing as time goes on, that many of the color distinctions had fissures at their borders apparently due to differential thermal expansion and contraction, that the color distinctions reached well below the limestone surface on many tracks, and that the phenomenon was not limited to the Taylor site alone. (Yet, despite these points, Morris suggested his painting or dying hypothesis in his ICR *Impact* article of January 1986.)

During Kuban's discussions with the creationists, he explored the authenticity of the Osborn-Caldwell print. This is the "mantrack" cast that Carl Baugh had metal casts made from for use as premiums to be given to those who donated one hundred dollars or more to the Louisiana Creation Legal Defense Fund or to his Creation Evidences Museum. Accompanying each metal cast was a parchment certificate of authenticity, stating that this "human footprint" was "originally excavated by Bill Osborn and verified by certified geologist Billy Caldwell, M.A., in the same rock stratum with dinosaur tracks."

During her early October visit, Marian Taylor had told Kuban that the Taylors had purchased Caldwell's cast in Glen Rose in the 1960s and that she knew it to be from a carving. She had also expressed displeasure about Baugh's current false claims about it. Kuban then followed up on this, checking with Grover C. Gibbs, Jr., in Glen Rose (owner of the Gibbs track) who was supposedly present at the time the original print was found. Gibbs could not provide

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data to substantiate Baugh's statements. Now Caldwell told Kuban that he had never seen the print in the riverbed but only in the back of Osborne's truck. Also, Jacob McFall, when asked, said that the print was a carving done by one of the Adams brothers (who had also carved the original Gibbs track) back during the Depression.

Mid to late November 1985. John McKay, a creationist from Australia who was visiting the United States, arrived at the Taylor site to take core samples. He was accompanied by Paul Taylor.

Later, during conversations with Kuban, Morris mentioned that the ICR staff had met, along with Paul Taylor, near San Diego to discuss how to respond to what Morris and Taylor had seen. Morris had stated earlier on the phone to Kuban that he wanted to recommend that the ICR publicly admit that all the Taylor site tracks were made by dinosaurs and "take their lumps." But the meeting apparently resulted in something different, as evidenced by the statements which cautiously declared that the Taylor trail was dinosaurian but that other trails on the site were merely "in doubt" (Taylor, 1985; Morris, 1986). A later statement appearing in the March 1986 issue of *Creation: Ex Nihilo*, an Australian publication, was even less forthright, speaking of the color distinctions (referred to as *stains* by creationists) as being of "unknown significance" and saying that "further research" would be necessary to explain the occurrence (Snelling, 1986).

March 23, 1986. My wife and I visited a few of the "mantrack" areas. At the McFall site, we noticed that all of the alleged human footprints were marked with red spray paint while all of the acknowledged dinosaur tracks were similarly marked with blue. All over the site, red and blue parenthesis set off the depressions. The only ones missed were the few the creationists seemed to have overlooked. My wife commented that this work gave the area the general appearance of having been victimized by vandals. One who didn't know better would think this was the work of teenage pranksters defacing property.

When we passed by Baugh's museum, we noticed that the cabin had been removed from the property by Al West, its owner, but that the shed remained. Kuban later reported that the shed was empty, Baugh having removed the contents of the museum to his mobile home.

Summation. This covers the tracking of those incredible creationists to the present. Has the pursuit been worth it? In terms of what it has taught us about creationist motivations, methods, and rationalizations, it has been invaluable.

As Stephen Jay Gould noted to me, the Paluxy River excavations represent "one of the few positive pieces of creation research that one can actually view." Creationist explorations of the area have served as a showcase for their methods. The world has had the chance to watch "scientific" creationists in action, and the

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picture that has emerged is more revealing than anything one can find in their books or from their platform presentations.

In terms of gathered data, scientific documentation, accuracy, and corroboration with other sources, the results of creationists such as Burdick, Taylor, Fields, Morris, and Baugh can hardly compare with those of scientists such as Bird, Langston, Kuban, Farlow, and the "Raiders." There is so much more available documentation by scientific investigators (including photos, maps, and videotapes) than there is by creationist investigators (who for years offered only a largely misleading film and credulous book). The respect for evidence and its preservation by the creationists has been incredibly limited—their discoveries apparently directed toward political and religious ends instead of being ends in themselves. This has led to a blatant disregard of the truth, with creationists sidestepping the kind of "full disclosure" that they demand from evolutionary scientists.

It is a good sign that creationists have made some admissions and taken at least one Paluxy film off the market. But the latest ICR catalog, mailed with the April 1986 *Acts and Facts*, still lists Morris' book for sale, though "with updated inserts reflecting the latest data and re-evaluations." (Mine came with a copy of Morris' recent *Impact* article inside.) This tells me that "scientific" creationists are still compromising a full commitment to science.

References

Godfrey, Laurie R. 1985. "Foot Notes of an Anatomist." *Creation/Evolution*, issue XV, pp. 16–36.

Golden, Gayle. February 25, 1985. "Glen Rose: Prehistoric Site Now a Scientific Battleground." *The Dallas Morning News*, pp. D6–7.

Hastings, Ronnie J. 1985. "Tracking Those Incredible Creationists." *Creation/Evolution*, issue XV, pp. 5–15.

Krebs, Mary Ann. August 11, 1985. "Theologian Says Man, Dinosaur Walked Together," *Waco Tribune-Herald*, p. 1; continued on p. 6A as "Creationist, Evolutionist Differ on Glen Rose Tracks."

Lang, Walter. May 1985. Letter from the Genesis Institute, Richfield, MN.

Morris, John. 1986. "The Paluxy River Mystery." *Impact*, 151 (Institute for Creation Research).

Pewe, Troy L. January/February 1985. "Prize for Trilobite in Cretaceous Not Yet Earned." Letter in *Creation/Evolution Newsletter*, 5:1:15.

Snelling, Andrew. March 1986. "Paluxy Controversey Continues," with editorial note, in *Creation: Ex Nihilo*, p. 37.

Taylor, Paul S. 1985. "Notice Regarding the Motion Picture *Footprints in Stone*" (Mesa, AZ: Films for Christ Association), Form N-6, dated December 4, 1985, revised December 5, 1985.

Taylor, Stanley E. 1972. *Footprints in Stone*. A film by Films for Christ Association, Elmwood, IL.

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Man—A Contemporary of the Dinosaurs?

Alexandr Romashko

Translated by Frank Zindler

Recently, creationists have been making much of reports out of the Soviet Union concerning coexisting footprints of humans and dinosaurs. Our intent is to translate and publish these reports as we locate them, letting the original writers speak for themselves. This, we hope, will aid in keeping rumors within manageable limits.

Only one step separated me from a terrace on the slope of Mount Kugitang-tau in southeast Turkmenia. I took the step and . . . entered a period of the Mesozoic, which is separated from today by a gap of almost 150 million years.

Right from my feet ran a trail of dinosaur footprints. It was as though these fossil giants had passed by quite recently, leaving behind deep prints of their gigantic feet—one and a half meters apart. As I was later told by the paleontologists, with this distance between the footprints, the height of the animals that left them must be eight to twelve meters.

All of a sudden we saw some not very distinct, though distinguishable, footprints beside a huge three-toed footprint of a dinosaur. They were similar to those of humans. At least they appeared so to anyone who saw them for the first time. I am not a scientist, yet I dared propose a hypothesis: "Who knows, could our ancient ancestor have been a contemporary of the dinosaur?"

"In the future science may give a positive answer to this question," said Professor Kurban Amanniazov, the leader of the expedition, a correspondent of the Academy of Science of the Turkmen Soviet Socialist Republic, and the director of the Geologic Institute of the Turkmen Academy of Science. "If it could be proved that these are really footprints of an anthropoid being, it would bring about a revolution in anthropology. The human race would become thirty times

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His article, translated into Czech, appeared in 1985 in the Czechoslovakian magazine, 100+1 ZZ *(22:2:60). The translation into English is by Dr. Frank Zindler, a scientist and linguist in Columbus, Ohio, who has been involved in the creation-evolution controversy for a number of years.*

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older, and its history would be extended to 150 million years."

"But there is no doubt about the dinosaur footprints?" I asked.

"No. This case is quite clear, although the discovery of dinosaur footprints is rare. The Turkmen discovery is unique in that the footprints were found in a large area—the dinosaur path is altogether ten kilometers long.

"This was probably the path along which the dinosaurs went to a watering place, in pairs or sometimes with their young (we can see smaller footprints beside the huge ones). Several expeditions working on Mount Kugitang-tau found altogether twenty-seven hundred prints, both of feet and conical dinosaur tails.

"In no other place on earth has such a large number been recorded. The international importance of this finding is increased by the fact that it belongs to the upper Jurassic geologic period. Only a few footprints from this period have been described so far. They have been found only in Portugal."

"How does the discovery contribute to science?" I asked.

"It changes our picture of the geological past of this region. The experts have assumed that in the Mesozoic there was a deep sea from which the mountains later arose. The dinosaur prints indicate that there was also dry land in this region. This forces us to take into account different conditions under which any utilizable minerals were formed and distributed, and it can help in predicting their location.

"It is important to preserve this rare and valuable paleontological find and to investigate it carefully from all sides. The Council of Ministers of the Turkmen Soviet Socialist Republic have been presented with a proposal to establish a nature preserve or a national park in this mountainous region, especially since the precious Karljuk karst cave was found here."

The mountainous region of Kugitang-tau in the southeast of Turkmenia still holds many secrets concerning the mysterious past of our planet.

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The Creationist Movement: A Sociological View

Barbara Hargrove

The current controversy over the teaching of creationism as well as evolution in school science courses threatens to result in an unhealthy and unnecessary polarization in society. As is so often the case, a small number of proponents of an extreme point of view are creating reactions that threaten an unfortunately extreme counterreaction.

Those who insist that creationism is the only appropriate teaching are a small, if vocal, minority. The threat they pose is exaggerated, first of all, because people whose world view is well within what we might call the liberal spectrum tend not to be able to recognize the sometimes subtle differences among conservative groups and, by lumping them together, assume a numerical strength for conservative extremists that is grossly inaccurate. Second, leaders of the creationist faction are given to making spurious claims about the numbers of their followers. Third, the rhetoric issuing from both sides is clouding many of the real issues involved.

On the other hand, there are in the present time conditions that may make such extreme demands more credible than they might ordinarily seem. Particularly if they evoke reactions anywhere near the opposite extreme pole, the creationists may be able to attract fellow travelers not often in full sympathy with their cause. The controversy itself is the tip of an iceberg of social unrest that we need to take quite seriously.

Subtle Differences Among Conservative Groups

The creationist position has paralleled the rise of such religio-political groups as

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the Moral Majority (recently renamed the Liberty Federation). As such, we may get some sort of grasp of the population espousing the creationist position by looking at the place of the Moral Majority in the spectrum of American Christians for whom it claims to speak. The definition of *Christian* used by such groups is far more narrow than that most commonly used in our society. It tends to omit the majority of the members of so-called mainline Protestant, or liberal churches, as well as most Catholics—the majority of practicing Christians. This majority of church members do *not* consider a literal interpretation of the biblical story of creation basic to their faith. Most are quite comfortable with an evolutionary understanding of the origin of the human species.

Creationists fit within that branch of Protestantism known as *evangelicalism.* Recent surveys have identified evangelicals as those who give an affirmative answer to these three issues: (1) having been born again or having had a born-again conversion; (2) having encouraged someone to accept Christ as their savior; and (3) believing in a literal interpretation of the Bible. Even though the last category would seem to make all evangelicals creationists, further probing shows that their literalism is often muted, that they have learned to overlook or adapt certain portions of the scriptures in order to reduce the cognitive dissonance a completely literal interpretation tends to cause. Overrepresented among evangelicals are women, nonwhites, persons with less than a college education, southerners, older people, rural residents, and those below average on the economic scale (the Princeton Religion Research Center, Inc., 1981).

They represent a segment of the population most nearly characterized by a form of social solidarity that Emile Durkheim called "mechanical." That is, the basis of social unity for them lies in the likeness of members of the society; anyone too different becomes a threat to stability and so tends to be gotten rid of, physically or psychologically. This is the expected order of traditional, isolated, rural societies and among groups not greatly touched by modernization, such as the poor, the uneducated, and, to some extent, women. These are people who see diversity of opinion as dangerous, who cannot count as friends persons with whom they disagree.

Yet such a stance has variations. Richard Quebedeaux has found five different categories of evangelicals: the closed fundamentalists, the open fundamentalists, mainstream evangelicals, charismatics, and the new evangelical left. These are distributed in a manner somewhat like a normal bell curve, in the order given. It is the closed fundamentalists who are the primary proponents of the "scientific creationist" point of view—really a small segment of the population. Other fundamentalists, at least, tend to follow the creationist point of view themselves but are not insistent that it be taught to others except in their own institutions.

Among other segments of the evangelical population of the country, there is much less demand for a narrow interpretation of the biblical account of creation. The primary controversy currently exercising in evangelical circles is the so-called

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"battle of the Bible," a battle concerning the inerrancy of scripture. Fundamentalists are here at war with other evangelicals because fundamentalists think that evangelicals have fallen into apostasy. Most evangelicals, while affirming the basic authority and truth of the Bible, accept the idea that it does not contain the direct words of God transmitted without error. Within the evangelical camp, there are many variations of this sort that are invisible to persons distant from them on the ideological scale. From that distance, as the saying goes, "they all look alike." Most evangelicals, and certainly most other Christians, do *not* subscribe to the demand of extremists that the Bible be treated as a science text as well as a moral guide.

Creationists are as unlikely to accept this statement concerning their small numbers as are people harassed by them and convinced of their power. For one thing, while there are representatives anywhere, the majority of this group live under relatively isolated circumstances. Persons dealing with them in those circumstances, on their home turf, as it were, may find that at the local level they have the power of a majority. Current forms of mobilization through television programs and direct-mail appeals have brought the group into the public spotlight in ways that seem to confirm their power. It is to here that we may look for the exaggeration of claims concerning numbers. We are only now beginning to find our way through the fog of numerical claims made during the 1980 campaign by such groups as Jerry Falwell's Moral Majority.

For example, while Falwell was happy to let the claim of 50 million viewers of the "Old Time Gospel Hour" go unchallenged, Arbitron, one of the standard television ratings organizations, found his actual audience to be about 1.5 million. Other televangelists had audiences ranging from less than half a million for James Robison to 2.5 million for Rex Humbard and Oral Roberts. Since many of the viewers of one also watch others of these television preachers, estimates of the *unduplicated* audiences of all the programs—including a sizeable slice for Robert Schuller, who has not been known to push the creationist position, run from 10 million to 14 million. In spite of Falwell's claim to have high percentages of adherents across the country, the polls show that most are in the locations of the traditional Bible Belt, the South and the Midwest. They range from about two-thirds to three-fourths over fifty years of age, with approximately the same proportion female (Hadden and Swann, 1981).

The Fundamentalist World View

Thus, claims for national political dominance are simply spurious. At the same time, the zeal with which they pursue their position and its unambiguous certainty give their proclamations a public power that is undeniable. Their rhetoric makes it clear that anyone who disagees with them is a threat to Christianity, to the

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American way of life, and to the future of humankind. Their world is one in which the social order of their childhood, as well as the visible order of nature in our time, are taken as givens, as expressions of divine law. Categories are firm and fixed—whether they be physical species, human races, social classes, or national boundaries. The order of all things is to them a moral order, and patterns of behavior given by their tradition are a part of that moral order—God-ordained and permanent. Modern social change, diversity, and pluralism are experienced by them as a falling away from the divine plan.

In such a world view, the purpose of education is to impart to children the knowledge of the divine order of things so that they will come to structure their behavior and aspirations according to the clear paths of divine dictates. Theirs is an orderly world, and the primary learning task, as they see it, is to come to comprehend that order in all its beauty and complexity. Those who would question the order, whether of legal or parental authority, of natural law or of religious principles, are as foolish as the person who would question that four is the sum of two and two.

Since the modern world is complex and fluid, people continue to raise questions and to be read out of the community of the righteous as heretics or apostates. It is for this reason that the numbers of dedicated closed fundamentalists remain small and that I would predict any political coalitions they form to be short-lived. But this is also the reason that they insist that books, teachers, programs, and the like must be carefully screened to prevent the distortions of truth they understand to be the natural effect of questions or contrasting views.

Such a world view takes it for granted that any contrary point of view must come from an equally well-structured ideology that represents the opposite pole. In religious terms, the values of the fundamentalists are assumed to be God's values, while any that would question them are Satan's. In the 1950s, the shape of satanic ideology was taken to be atheistic communism—the adjective was always attached. Today, the enemy is "secular humanism," again always with the adjective that identifies the position as anti-God. Writes Tim LaHaye, founder and president of Family Life Seminars: humanism boasts five tenets—atheism, evolution, amorality, autonomy, and a socialist one-world view (1980). It is taken for granted that a person who subscribes to one of these points accepts them all in the specific form that LaHaye uses as his definitions.

Just as it is hard for liberals to tell conservative Christians apart, the distance of these fundamentalists from liberal thought and life-styles causes them to lump most of the variety of modern life into a single, monolithic enemy. They see secular humanists in control of the Supreme Court, federal and state governments, public education, colleges and universities, textbook publishers, and the major foundations: Ford, Rockefeller, and Carnegie. They assume humanist control of commerical and public television, radio, newspapers, movies, magazines, and the porno trade. Humanist organizations they target include the ACLU, the NEA,

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SIECUS, NOW, and unions, along with the American Humanist Association (LaHaye, 1980). From their distance, they see no differences between these groups, other than that they are in positions to launch different forms of satanic attack upon God's truth and a Christian style of life as they understand it.

The Response to Fundamentalism

The primary danger of this ideological polarization is that their shotgun attack might invoke a response that gives credence to the creationists' claim that secular humanism is a specific religion involving without variation all the facets they depict. If educators, government agencies, media executives, and others mobilize against the threat of creationists in ways that mirror their lumping together of enemy groups, they are likely to alienate groups ordinarily highly critical of the creationist position.

For example, most evangelicals as well as nearly all liberal church people have no desire to put power in the society into the hands of Christian extremists. The moderate Christian position on the creation-evolution controversy is that it rests upon a spurious distinction. They accept the evolutionary pattern as a relatively accurate description of our understanding of the origin of current species, rejecting only the claim that the process was the result of ultimately blind chance. The biblical account is held to be a presentation of an understanding of the whole process as intentional, related to forces beyond our comprehension, to a divine actor who is called God. Sophisticated Christians and sophisticated scientists are coming together in a more fluid understanding of the world of nature and of culture. Even as we come to understand through the social and behavioral sciences that much of the way we comprehend our religion comes out of our experience in society, so we have come to understand that our science is also conditioned by the culture. Scientists on the frontiers of their disciplines can no longer afford to make dogmatic statements about reality or the laws of nature, as they take seriously the prevalence of the principle of indeterminacy. Consequently, it becomes possible for both the religious person and the scientist to view evolution as a description of the activity of a creator God and to claim this to be an expansion of our undertanding of divine greatness in that the acts of creation are extended through aeons and are still continuing, as compared with the limited idea of a six-day creation.

Controversies demanding that they choose between an understanding of origins as a sudden and complete creation and one positing the universe as a cosmic accident make most Christians uneasy, if not angry. Should the response of groups targeted by the creationists demand such a choice, many moderate Christians could be pushed closer to the creationist position than they would

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really like. Similarly, some scientists may be pushed to defend their fields with a dogmatism unsupported by their research.

The Need for Meaning and Order

Part of the uneasiness that exists is rooted in the observation of current social conditions. It is not just a Christian proposition but a general observation that people need some sense of meaning in human life, some appreciation of the corporate nature of civilization, in order to live together in any constructive way. Without that, people are reduced to the Hobbesian world of "each against all," to a life indeed likely to be "nasty, brutish, and short." Human beings need some understanding of their nature and destiny that has the power to entice them to put aside some private gratifications for the good of the whole. They need somehow to be motivated to the task of culture-building. Without that, there is no reason to resist attacking the weak or the old to take their goods, however pitiful; to resist looting and burning an apartment house in order to collect insurance; to refrain from dipping into the company till or from beating one's spouse; or to prevent beginning a nuclear holocaust.

Today our daily news brings us reports or threats of all these things. We are obviously going through a period when the mechanisms of generating commitment to the culture are functioning poorly. The creationists have found a simplistic solution to that by laying it all at the feet of those who cast doubt on the existence of a divine creator who has a plan for human existence and who has established firm guidelines of behavior to fit that plan. A response to their charges that insists on a totally secular definition of the nature of the universe and of human life, that demands a definition of human freedom indistinguishable from irresponsible, socially destructive behavior, may push the great majority of moderate Christians and others in the direction of the creationists who are now considered extremist zealots.

Most Americans are fimly committed to our historic values of freedom of thought and speech, individual liberties, and tolerance. But they also recognize that these cannot be protected in the absence of public order. If they should become convinced that the teachings of "secular humanism," rather than reflecting the proper pursuit of those values, represents a distinct religion that would destroy the public order, they could be influenced by the rhetoric of the creationists. If those who promote values of individual liberty are unable to promote as well any sense of public morality that allows our public life to be dependable and safe, the natural protective mechanisms of any social order are likely to give rise to movements that destroy them or replace them in positions of public responsibility.

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Social Change

I am convinced that the current creationist controversy is only a small eddy in the larger stream of social change that is leading us toward a broad restructuring of modern civilization. We appear to be at a historic juncture similar to that which witnessed the transition from a feudal society in western Europe to the modern industrial culture. At that time, a social class of capitalists and entrepreneurs moved from obscurity into social dominance. They did not fit into the pattern of feudal estates and so were not part of the system of public morality of the time. It took the Protestant Reformation to provide them with legitimacy and with an ethic sufficient to guide their social leadership. In the so-called First World, we are now passing out of that period of economic development and industrialization. The old Protestant ethic, secularized and somewhat strengthened by the frontier experience to become the foundation of the American way of life, is now under fire. The assumption of exploitative dominance over nature as working out one's righteous vocation is coming into question as we face ecological crises and the limits to growth. We live in an uncomfortable tension between the old ethic's demand that we live simply and save surplus—so functional in a developing economy—and modern demands that we consume more goods in order to keep the wheels of production turning.

In the meantime, we are entering a culture dominated less by entrepreneurial activity and industrial production than by the management of information and human systems. Coming into dominance in that culture is a new class of people whose capital lies not in goods but in their expertise (Gouldner, 1978). The basis of that expertise is the educational institution, often the higher reaches of higher education. The tradition of higher education lies in a small group of intelligentsia that historically has been free to attach itself to any appropriate social class or to stand free to criticize the various vested interests from the heights of disinterested concern for the public good. It is impossible for a group of people as large as this new class of experts to remain above the pull of vested interest and certainly impossible for it to remain disinterestedly distant from a society they are coming to dominate. At the present time, like the capitalists of late feudalism, they are coming to dominance without clear legitimation from the culture and without a grounded and legitimized ethic to guide their influence on political leaders.

The creationist controversy is the result of a nativistic movement seeking to hold back the flow of change, to reestablish the dominance of the old ethic and the classes it legitimated by reinstating in unambiguous form its underlying myth. To that extent, the creationists speak for the uneasiness of those who sense a vacuum of ethics in the bureaucracies, research institutions, and information centers of public life. The criticism is far broader than the bounds of fundamentalist creationism. The ethic which has appeared to dominate the new class has been one of self-actualization, with a moral duty to self-development that

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demands individual autonomy. Yet, in his most recent book, Daniel Yankelovich points out how the isolated, individualistic search for the self cuts off the possibilities of discovering the social dimensions of human nature, thus foreclosing the very actualization which is sought (1981). He cites national surveys by his firm that indicate a movement toward what he calls an "ethic of commitment," which seeks an inclusive ideology grounded in human associations to which a person may commit him- or herself.

The schools may indeed be an institutional base for the new class of information and systems managers, but only educational professionals can make them a permanent focus of commitment. The times indicate a demand for education to attempt to provide a grounded sense of meaning and purpose that can serve as a basis for defining an appropriate public ethic for the social leaders who are being trained in the schools. While its character must transcend the narrow limits of any sectarian religious forms, mainline churches are in a position to cooperate with educators in what has been the American pattern, whereby the churches flesh out a general world view, sometimes called American civil religion, with more specific variations on the theme out of their own traditions, and the schools inculcate that general sense of meaning at the point where all the major religious groups and secular orientations overlap.

The danger of creationist rhetoric is that it will alienate the secular sources of meaning from those that would provide strength for a new world view and ethic through communal involvement, affective practices, and supramundane roots available in the religious institutions. The evidence of this alienation of educational from religious institutions at the present time is mixed. Surveys of church attendance have shown a consistent pattern of higher involvement in the churches by those whose education is beyond the high school diploma than those who are less well educated, at least since the early 1950s (Roozen, 1979). However, other studies have shown rather consistent patterns of decreased involvement in institutional religion among those who move on through graduate school, particularly among those who identify with intellectualism as a value (Caplovitz and Sherrow, 1977). The idea of the educational system as an alternative religious base is neither a fact to be accepted nor an unfounded idea. Unified reaction against all religion because of the pressure of creationists could make their charges in this matter a self-fulfilling prophecy.

Creationism, united with the power of modern television evangelism and direct-mail communication can mobilize much of the discontent that exists in the public perception of the dominance of bureaucrats and information managers over our lives. This may be particularly true in those areas of the country where the old ethic still works—places, for example, where entrepreneurs and capitalists are profiting from the energy boom and seek the dominant position usually granted them in such circumstances. There is little doubt that the lines are drawn clearly in these cases, as developers square off against environmentalists and

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contests heat up concerning land use and life-styles.

If the threat of the creationists engenders a direct counterattack, there will be further threat of social disorder. We could be faced with a period of revolutions and counterrevolutions reminiscent of the unrest that accompanied the Protestant Reformation and the rise of industrial society. We might hope that we can learn from that history and from our knowledge of social and cultural processes. If indeed we are moving toward a society dominated by information and human systems specialists, we should be able to develop rational patterns of change. If the forces of moderation can begin to develop a world view and an ethic to fill what seems to be a genuine vacuum in our culture, the power of the creationist protest will most likely shrink to its natural base in a small group of isolated people unable to adjust to the positive possibilities of a post-industrial society. Those moderate forces, I suspect, will require both the educational and the religious institutions of this country to serve as a base while maintaining very carefully the separate spheres of each. It will be an interesting prospect!

References

Caplovitz, David, and Sherrow, Fred. 1977. *The Religious Drop-outs: Apostasy Among College Graduates* (Beverly Hills, CA: Sage Publications).

Gouldner, Alvin. 1978. *The Future of Intellectuals and the Rise of the New Class* (New York: Seabury), p. 21.

Hadden, Jeffrey K., and Swann, Charles. 1981. *Prime Time Preachers* (Reading, MA: Addison Wesley), pp. 47–62.

LaHaye, Tim. 1980. *The Battle for the Mind* (Old Tappan, NJ: Fleming H. Revell Co.), pp. 59–78.

Religion in America 1981 (Princeton: The Princeton Religion Research Center, Inc., 1981), pp. 57–58.

Roozen, David A. 1979. "The Efficacy of Demographic Theories of Religious Change: Protestant Church Attendance, 1952–68," in *Understanding Church Growth and Decline, 1950–1978*, edited by Dean R. Hoge and David A. Roozen (New York: Pilgrim Press), p. 139.

Yankelovich, Daniel. 1981. *New Rules: Searching for Fulfillment in a World Turned Upside Down* (New York: Random House).

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What Mount Rushmore and DNA Have in Common

Norman L. Geisler

This and the following articles are the continuation of a debate on the question of design in nature—a debate that began in issue XIII and has been continued in subsequent issues.

Certainly we would be delighted to discover that our evolutionist friends admit that the faces on Mount Rushmore had an intelligent primary cause because of the complex information they convey. But we would be surprised to hear them claim that the same kind of complex information found in DNA is as different as "apples and oranges." For Yockey showed that the kind of complex information in a human language and in DNA is "mathematically identical" (1981).

Indeed, a recent scientific critique of spontaneous generation scenarios of first life by Charles Thaxton, et al. (1984), demonstrates that the messages in DNA and human language both have the same specified complexity which is not found in crystals or other nonliving things. A crystal has only a simple, repeated message, such as:

"Faces Faces Faces Faces."

But DNA has specified complexity in its message, such as:

"These are the faces of four famous American presidents."

Now it is our regular, uniform experience that specified complexity results from an intelligent cause. And regularity is the essential requirement of scientific understanding. Thus, positing an intelligent cause of the complex information in DNA qualifies as scientific.

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Nor does it help for evolutionists to appeal to RNA to explain how first life arose. For RNA also carries highly complex information which, like DNA, calls for an intelligent cause. Further, since there admittedly was no human intelligence before life arose, then it would be necessary for this intelligence to be superhuman. And if one adds to this evidence that the whole natural universe had a beginning (Jastrow, 1980), then there is no reason why this cause could not be a supernatural one. Certainly, to claim that positing a supernatural cause is "self-contradictory" only reveals one's philosophical bias in favor of naturalism. It is not a requirement of a scientific approach to origins. Indeed, many scientists, including most of the founders of modern science—Kepler, Kelvin, Newton, et al.—considered the primary cause of origins to be a supernatural one.

Finally, would we believe it consistent with the scientific principle of uniformity if our evolutionist friends insisted that one must first establish at least one connection with a superhuman (or supernatural) cause before it would be proper to posit such a cause for the first living thing? Would they also insist that a connection must be established with at least one natural cause of a macroevolutionary change before they can legitimately believe there was one? Do not even many evolutionists believe that we could posit the existence of superintelligent beings in outer space upon the receipt of the very first short message from them (Sagan, 1979)? What then except a bias in favor of only naturalistic explanations would lead evolutionists to insist that an intelligent cause, like the ones known regularly to produce specified complexity in RNA and DNA, could not be a supernatural one?

Certainly the least that fair-minded observers will conclude is that uniform experience in the present informs us that the cause which is capable of producing the kind of specified complexity which is found in human language and in the DNA of living things could be an intelligent one. Thus, whatever unknown natural causes may yet be found capable of producing specified complexity in the first living cell will not diminish the regular, uniform, scientific observation that this can be done by intelligent intervention (manipulation). For future findings about unusual erosion processes will not diminish the credibility, based upon uniform experience, of positing an intelligent cause of Mount Rushmore. Thus we may conclude that there is positive evidence in the regular (uniform) connection between intelligent causes and complex information (specified complexity) to include creationist views in the realm of scientific speculations about origins.

References

Jastrow, Robert. 1980. *God and the Astronomers* (New York: Warner Books).

Sagan, Carl. 1979. *Broca's Brain* (New York: Random House), p. 275.

Yockey, Hubert P. 1981. "Self Organization Origin of Life Scenarios and Information Theory." *Journal of Theoretical Biology, 91.*

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The Mystery Behind the Mystery

Frederick Edwords

In his latest response, Dr. Norman Geisler seems to want to focus upon information content alone and to ignore other features of the biological systems and human artifacts that he compares. My point is that he cannot legitimately do this. That is the largest part of the "apples and oranges" problem to which I alluded earlier.

Geisler also seems to be overly enamored with the *present* information content of DNA and RNA, not considering the possibility that they probably were not always so complex. DNA or RNA is most likely the product of simpler forms having more repetitive messages—and Geisler seems to have nothing against the natural origin of repetitive messages. This is part of what current origin of life research is about.

To this, Geisler will want to reiterate his point that "it is our regular, uniform experience that specified complexity results from an intelligent cause." But this statement is not complete. We also know that specified complexity results without intelligent intervention. For example, micro-evolutionary changes, such as speciation (which most creationists admit occurs entirely by natural means), involve alterations in the DNA code. I have yet to hear a creationist posit a divine hand fine-tuning the DNA at every speciation event. Since speciation can increase complexity (Futuyma, 1983), then we have an increase in the complexity of the DNA coming about naturally. If evolution can make DNA more complex today, is it far-fetched to suggest that the present complexity found in DNA is the product of the same process?

Now, for the first time, Geisler comes forward and posits that the intelligence behind life must necessarily be superhuman and supernatural, and he hints that it may also be the cause of the whole natural universe. What a tremendous

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intelligence this must be (or must have *been*—Geisler's deistic argument gives nothing for this intelligence to do in the present)! And one cannot imagine such a tremendous intelligence simply coming about by chance—at least not if Geisler is right that intelligence cannot originate that way. Therefore, this intelligence, like human intelligence, must have been created! And from this we get a series of creators reaching back through an infinity of time. Is that a supportable position?

Actually, the only reason Geisler had to resort to a supernatural designer-creator is because he is faced with a mystery he cannot solve—the mystery of life's origin. Since unsolved mysteries are unpleasant to some, he has felt the need to solve it before enough data are in. But he solves the mystery by positing another mystery—namely, the mystery of the supernatural. As a result, we get two mysteries for the price of one.

And just to make sure that his supernatural designer-creator is not put out of work by some new scientific discovery (as often happens with gods-of-the-gaps like Geisler's), he declares that, whatever "natural causes may yet be found capable of producing specified complexity in the first living cell," these will in no way diminish his argument that a supernatural designer-creator can do it, too, and was therefore the *real* cause.

Is he afraid that evolutionary scientists are on the verge of such a discovery, a specific and workable origin of life scenario? If so, this is a feeble way to render his natural theology immune from the effects of it. He has not provided a reason why we should opt for intelligent design in spite of a discovery showing it not to be necessary. In the case of Mount Rushmore, we have direct historical knowledge of the sculptor. What direct knowledge outside of observation of information content do we have for positing a designer of life? Without such knowledge, why should we favor Geisler's position?

Given two explanations for the same phenomena, Occam's razor requires that we pick the simplest one. The naturalistic explanation is simpler because it deals with the natural world we know and does not require the adding on of another level of complexity—the mysterious world of the supernatural.

Reference

Futuyma, Douglas J. 1983. *Science on Trial: The Case for Evolution* (New York: Pantheon), pp. 114–160.

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Materialist Origin of Life Scenarios and Creationism

Hubert P. Yockey

Karl K. Darrow, for many years secretary for the American Physical Society, likened the dynamic phase of a field in science to the building of a cathedral. The construction site is one of great confusion. Stones are being supplied. Workers are chipping away at them leaving debris lying about. Creaking winches are hoisting the finished stones into place. Some workers are going about their tasks in silence, except for the noise of their hammers. Others are arguing, shouting, and cursing. (Yes, cursing in a cathedral!) The foundation has been laid. The walls are partly up. Many questions remain to be answered. Will stresses in the roof cause the walls to collapse? How should the walls be buttressed without making the building ugly? Can the building be completed with materials on hand? Is it necessary to do research and development on new materials?

When the last of the workers has descended from the roof and the last of the debris has been carted away, the cathedral can be dedicated and will start to perform its function. The priests and acolytes come in orderly and solemn procession. Their chants fill the cathedral with music. The cathedral now serves the purpose for which it was built, and the workers move on to other jobs.

The workers are still engaging in the job of understanding the origin of life and evolution. The fact that they are arguing, shouting, and even cursing each other does not mean that their job is hopeless. Rather it testifies to the creativity and dynamism of the work itself. Like building a cathedral, problems previously unforeseen arise during construction. Old ideas are found to be faulty. Modifications must be made. New ideas come forth and are incorporated. But the work goes on in spite of what, to outsiders, appears to be confusion.

Even a cathedral will not be raised by divine intervention but, rather, by the labor of the workers.

Aristophanes in *The Clouds* has Socrates say that Zeus sometimes strikes his

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own temples with his thunderbolts. Christian churches are also sometimes destroyed by fire, lightning, or earthquakes. Clearly, if temples and cathedrals are to be built, people must build them. Let us therefore render unto the engineers what is due them and unto God that which is God's.

How does this apply to the creation-evolution controversy? In the first place, the task of the working scientist is:

1. Find the facts which relate to the origin of life (what is life?) and the evolution of life forms we find today and in the fossil record.
2. Find relationships between these facts so that they can be understood in terms of a small number of general principles. These relationships must be consistent with other pertinent facts, such as those provided by physics, chemistry, geology, astronomy, and so forth. Among such facts are the age of the universe, the galaxy, the solar system, the earth, and the fossiliferous rocks.

The results of two of my articles in *The Journal of Theoretical Biology* have been used to support "equal time" for a religious, creationist point of view. These articles were published as part of the arguing of a worker engaged in the study of the origin of life. These arguments were directed toward another kind of creationist: the materialist creationist. These people are of two kinds:

1. Those who believe that the universe and the earth are very old—old enough for almost anything not strictly forbidden to have happened by chance somewhere at some time. They believe that random formation of biological building stones created the protobiont and that this must have happened in sufficiently earthlike planets elsewhere in the galaxy. Accordingly, the galaxy is pullulating with civilizations. It is worth a great deal of other people's money to establish contact with these civilizations.
2. Those who concede that it is too improbable for a protobiont to have emerged by chance but that this happened because the appropriate molecules self-organized in protenoids (or whatever). Since this happened on earth, it must have happened on earthlike planets elsewhere, and the same conclusion as above is arrived at.

What I believe I showed was that every scenario offered by the materialist creationists of any school is invalid since they conflict with biological or mathematical facts. My dispute with other workers should not be used to support the position of the religious creationists. It is my view that the work cannot go on if the architect entertains false views of the stresses in the cathedral, the strength of his material, or if he plans to build in a marsh.

Reference to divine intervention lies outside the domain of science. Just as the cathedral builders used the materials at hand (that is, no structural steel or

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steel-reinforced concrete), the scientist must also use the facts he has at hand. If these are insufficient, then he must get more facts. Anyone who reads my papers will find that just this was my conclusion. We cannot explain the origin of life and evolution without more facts. So let us get on with the work and not appeal to divine intervention.

No public school child should be told that fossils are a trick of the devil to test his or her faith (see the Book of Job). Neither should he or she be told that God plays dice with the world and that he or she is only a chance configuration of atoms. If all life is only material, then the crimes of Hitler, Stalin, and Mao Tse-tung are of no consequence. If humans are only matter, it is no worse to burn a ton of humans than to burn a ton of coal.

References

Yockey, Hubert P. 1981. "Self Organization Origin of Life Scenarios and Information Theory." *Journal of Theoretical Biology*, 91:13.

———. 1977. "A Calculation of the Probability of Spontaneous Biogenesis by Information Theory." *Journal of Theoretical Biology*, 67:377–398.

ERRATA

Dr. Ronnie Hastings would like to correct two errors that appeared in *Creation/Evolution* XV.

FIGURE 6 in the Plates page, which features a comparison of the Taylor and II-D dinosaur trails, shows the direction of travel for the II-D trail as 10.1 degrees S of W, when it should be 9.9 degrees S of W. It should also have been noted that the two trails actually cross each other. This is the most important source of the stories that the Paluxy River area near Glen Rose features a human trackway that crosses a dinosaur trackway.

Also, on page thirteen of Hastings' article, it states that Dr. Schafersman visited Baugh's creation museum and the "mantrack" sites on September 1, 1984. He actually visited the museum and the "mantrack" sites on September 1 and 2 and ran into Richard L. Tierney who was photographing creationist sites at the time.

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Letters to the Editor

Norman Geisler's main argument (issue XIV) may be answered by examining the role that information content or form plays in determining whether something has an intelligent origin or not.

A blob of pure aluminum does not have much information content to brag about yet is surely as much in need of a creator as is a watch. It's not the amount of information that guarantees a creator but rather the high improbability of that information being produced by the raw forces of nature. If watches formed naturally in beach sand, we would have no way of knowing whether a newly discovered watch had a creator or not.

Since nature does not refine quantities of pure aluminum on earth, create watches, or carve faces on Mount Rushmore, it is clear that intelligence is involved in the production of those objects. On the other hand, what can we say about the marvelous design of a blade of grass? Its information content may be great and the design may appeal to our sense of beauty and order, but that in itself doesn't logically rule out a natural origin. The ecology of a forest is also complex, beautiful, and orderly; it self-adjusts to meet the needs of the environment, including chance factors (humanmade or natural). One need not assume that each ecological zone was designed by a special act of intelligent creation. Those arrangements that don't work under the present environment simply die out or move elsewhere! Indeed, the concept of evolution offers a natural explanation for the general emergence and complexity of life forms and therefore of their marvelous designs.

In attacking evolution, one ought not employ an argument which assumes that evolution is false. We must not assume what we're trying to prove! Argument from design essentially boils down to the assumption that complex design cannot be natural (that is, that evolution is false), and therefore the argument cannot be used against evolution. In the case of watches, we can employ independent evidence to eliminate the natural alternative. But we cannot do the same for grass by merely claiming that its design is complex and wonderful; evolution claims to be able to evolve such design. We cannot deny a natural alternative for the origin of grass by assuming that some claims made by that alternative are false. We must first prove evolution false before we can use the design argument to prove evolution false! The

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design argument is not particularly helpful in this matter.

In summary, in order to prove an intelligent origin, one must first eliminate the alternative (nature), and one cannot logically do that by appealing to complexity and order in design. One must show that the design is incompatible with nature—not assume it.

—Dave Matson

Ronald H. Pine, in his article, "But Some of Them *Are* Scientists, Aren't They?" (issue XIV, page ten), writes: "At the beginning of and throughout a scientific endeavor, all that is supernatural is excluded, and thus it is not surprising that, at the end of a scientific (as opposed to a pseudoscientific) investigation, no outlines of a creator, angels, devils, or demons appear."

This sentence gives too much away and creates grave problems in logic. The author concedes here the existence and knowledge of the "supernatural" ("all that *is* supernatural is *excluded*"), and he claims at the same time that scientists, by excluding "it" from "consideration," are therefore assured of the nonappearance in their work of "a creator, angels, devils, or demons." But since no one knows what the "supernatural" is or is not capable of, how can it be assumed so glibly that "it" could not insinuate itself—in spite of being excluded by a mere mortal—into the scientific observations, results, or conclusions?

Surely it is quite inadequate for a scientist to adopt such a timid agnostic stance vis-a-vis "the supernatural." The scientist has, in fact, every right, and, indeed, a duty, to declare the "supernatural" to be a nullity and to demand that the burden of proof for the hypothetical existence of such a concept be placed upon those who profess to believe in it. As long as no conclusive evidence is provided for the existence and properties of alleged supernatural effects, the scientist is totally unconcerned and need not, indeed is incapable of, consciously excluding these unknown effects. Thus, until such time as and when a "demon" detector, an "angel" detector, or a "soul" detector are clearly demonstrated, the nonexistence of all "supernatural" beings, powers, or effects is justly taken for granted by scientists and needs no proof whatsoever.

—Paul Pfalzner

I have been interested in the creation-evolution controversy for a little over a year now and have acquired quite a few books on the subject. Speaking from a layperson's point of view, I have found the majority of the books fairly hard to understand. That is, all except for one. The book, *In the Beginning: A Scientist Shows Why the Creationists Are Wrong*, by Chris McGowan is by far the best. McGowan proves that evolutionary biology can be explained in a simple,

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straightforward manner. He even makes it fun to read about!

The whole point of my letter is that part of the reason the creationists and their books are so successful is that they use this type of approach. It is the general public which needs to be informed—not so much the educators. The public are the creationists' victims, not the scientists. And, if the average "Joe" or "Jane" has to have a B.S. in biology in order to read a book, he or she is just not going to do it!

There needs to be more books written like Chris McGowan's. I urge anyone planning to write a book on the creation-evolution controversy to, above all, *keep it simple!*

—Jim Waugaman, Jr.

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